



CULTURE OF POLARIZATION: AN ANALYSIS OF SOCIAL PARTICIPATION POST #DEMONETISATION ON TWITTER

Sumit Malik¹, Dr. Tarjeet Sabharwal²

¹ Officer Communications, Tata Trusts, New Delhi, India.

² Associate Professor, Delhi College of Arts & Commerce, University of Delhi, India.

ABSTRACT

This research presents an overview of the impact of the notification of demonetization on patterns of social participation and group polarization on twitter. It attempts to draw together in a single volume a wide range of factors that contribute to the immediate responses and reactions of people on twitter on a calamitous event. The study engages in understanding the group dynamics and the nature of different forms of communication in attitude formation.

The prime focus of this research work is to throw light on the intervening variables that impact upon group polarization and uniformity in opinion forming within groups rather than looking for a unidimensional relationship between social engagement and the culture of polarization. Homophily among people remains an important tool in understanding group polarisation, attitude and interaction forms, as there is a tendency among people both offline and online to align with isomorphic groups which reinforce their existing attitudes.

This scholarly work provides a detailed account of the patterns of social engagement, opinion and attitude formation on the basis of reply-pair tweets, frequency of tweets around different clusters of time and captured tweets. The study highlighted that the range of people on the spectrum of diversity gained to a large extent.

Findings in this study thus provide a useful insight into the role of Twitter being a more breaking news medium than a social networking site. One of the major indications in this study to acknowledge that under specific conditions of filtering, algorithm-gate keeping~ by the socio-technical giants, group polarization may or may not produce the given impact within the framework of online social participation and engagement.

KEY WORDS: Cultural Polarisation, Demonetisation, Twitter, Social networking sites, Mediated communication, Social Participation.

INTRODUCTION:

Every media, ever since their inventions – from the newspaper to radio to television – brought with themselves a new range of possibilities. What internet mediated communication did was to take those possibilities multiple notches higher.

The phrase 'new media' denotes a wide variety of recent developments in the fields of media and communications. It encompasses not only new forms of media delivery, but also new convergences between media technologies and new ways in which people use, and interact with, media texts. Fundamental to these trends has been the growing significance of digital technology in the production, storage and transmission of images, text, sound and data.

The history of media and communication has been punctuated by important technological innovations and these have always had significant social and economic consequences. Digitization, however, is seen by many commentators as representing an especially dramatic moment of technologically driven change. And, certainly, the media in the 'digital age' possess features that seem to set them apart from their predecessors. Compared to analogue technology, for example, digital formats allow a much greater compression of data, making it possible for broadcast systems to carry many more times the volume of information. Digital technology, therefore, has facilitated a shift to 'narrowcasting', with producers able to tailor media content to specific niche (even individualized) market segments.

Greater dimensions of interactivity are also possible with digital technology. Digitally-based websites, games, DVDs and TV services all allow for new, innovative ways for audiences to participate in, perhaps even take control of, the processes of media consumption. In itself, the character of the web is distinctly interactive, users creating their own 'trails' through cyberspace as they click through an infinite matrix of hypertext links.

Social media, most notably, opened its users to create and share content; connecting them in ways never before imagined. But it would also be unfair not to acknowledge the fact that the individual did not have a 'voice' when considering the 'traditional' media. The radio phone-ins, letters to the editor, and similar talk-back mechanisms for TV- all stand testimony to this fact. But this possibility of a 'voice to the audience' was selective; only a select few and not everyone who was a user of a particular medium could voice her/himself. The internet, by offering a 'voice to every user' thus became a marked departure from its traditional counterparts. There was a time when 'you've got mail' was enough to get one excited; today, it's doubtful if someone shares this sentiment.

The convergence of digital, satellite and cable technology, moreover, has transformed systems of media distribution, allowing producers to escape the geographical, cultural and regulatory boundaries that formerly governed media cir-

ulation and reception. In these terms, Marshall McLuhan's notion of the 'global village' may have become a reality, Brian McNair arguing that the rise of 'new media' technologies has engendered 'the most radical dissolution of the barriers of time and space which have constrained human communication since we left the savannas and learnt to use language' (McNair, 2002). Room exists, however, to qualify some of the more grandiose and celebratory claims made for the impact of new media technology.

The 'new' media, for example, have supplemented rather than swept away older formats. Significant continuities exist between 'old' and 'new', with 'new' media systems relying on existing technologies such as established TV services and telephone lines, while most 'new' media platforms have depended on the repackaging of older material (the success of CD sales, for instance, relying on the re-issue of artists' back catalogues). McLuhan's vision of the global media 'village', meanwhile, may still be a long way off since the world remains starkly divided between the 'media rich' and the 'media poor'.

Today, the internet has become so indispensable that users experience a void when they aren't able to consume their choice of media- something that is highly visible when social media websites are down for maintenance (Twitter) or when some popular applications are facing some technical error.

WhatsApp experienced an outage for around 210 minutes on 22nd April 2014 from 11am to 2:30 pm PST for the first time. Users around the world reported that they were unable to send messages and WhatsApp confirmed these problems at 12:16pm PST with a tweet stating "sorry we currently experiencing server issues. We hope to be back up and recovered shortly."

Even on previous occasions, when WhatsApp didn't work, users turned to Twitter.

#WhileTwitterWasDown was the hashtag that got popular whilst Twitter was undergoing maintenance in the night from 11th to 12th March 2014. It trended at the top spot for two complete days.

The internet, with its social media offering, has today become a part of a definition of one's psyche. The impact that these socializing-via-internet outlets have on one's identity are so deep rooted that one sees their overt manifestation in the daily discourse- most notably (but not limited to those) of the digital natives. Words of online origin like 'lol', 'epic', or even 'facepalm' appear almost naturally in the offline/real discourse.

The contemporary theory on language learning and teaching embodies the above-mentioned concept of 'void' as: the identity of the language learner

addresses the ways in which language learners understand their relationship to the social world, how that relationship is constructed across time and space, and how the learner understands possibilities for the future. (Norton, B., 2000)

For a deeper understanding of the reasons for such trends one needs to understand their very genesis; which can be explained using various paradigms and theories involved in celebrity studies. These theories would give a background to further understand the hypotheses formulated in this dissertation, and also provide a premise in understanding the conclusions that follow.

Technological Determinism:

Also, as online communication (e.g., email; SMS; instant messaging; video chat; online social communities) becomes commonplace, understanding both the process of online communication as well as the product of that communicative phenomenon becomes important. Each online communicative act relies on the technology to translate the message from sender to receiver(s); without the technology, online communication cannot take place at all. Marshall McLuhan, the media guru, is famous for his saying that 'medium is the message'. He could be described as a 'technological determinist', in that he believes technological innovation reshapes social life and drives social change. Technology determines how society functions, rather than society determining how technology should be developed or used. In other words, the technology used to communicate a message also structures the way we think and interact and perceive the world. We are beginning to see ourselves as global citizens in part because new communication technologies have enabled us to relate to each other in this way.

Different media also relate to different ways of organizing power. For example, print media privileges sight, education, and the media producer, correlating with a fairly impersonal, linear, rational way of thinking and relating to others.

Newer media forms such as interactive television and computer mediated communication offer increasing interactivity, autonomy, and choice on the part of the user and unprecedented personal control over the production, manipulation, and distribution of content. For these reasons the 'democratic' attributes of new media are praised for equalizing the power balance between media consumers and media producers, in some cases obliterating the distinction altogether.

REVIEW OF LITERATURE:

Of all the technological changes that have been sweeping through the societies in the last decade, the most fundamental and pervasive in their effects on human society, has been the changes in communication (Millikan, 1961).

Progressive changes in communication networks have not only brought distant cultures together in a society, but have contributed to the conception of a powerful networked public space (McQuire, 2016). Underpinned by the low transaction costs of networked digital communication, social participation has become a zeitgeist, a value that almost everyone seems to subscribe to. However, the researcher suggests that one needs to deepen our analysis to better understand what participation on a digitalized public space might involve in different settings and particular contexts.

There is a critical shift in the role of the public as audience or mere onlookers in the online/digital space. The rhetoric of participation is central to the emergence of group polarisation and group behaviour especially on issues of controversy. The nature and form of engagement on the networked terrain is a concomitant process where the alignment of the individual towards collective subjects necessitates an isomorphic relation of the individual with collective subjects or groups. Klapper (1960) in his reinforcement theory argues that there are particular attitudes and beliefs that the mass media is unlikely to change, such as radical changes and religious intolerance because attitudes are crucial to their self-images and central to clusters of related attitudes.

Close to this theory, is the principle of homophily, which states that interactions between similar people occur more often than among dissimilar people (Lazarsfeld & Merton, 1954). Many online communities are structured around groups of socially similar individuals. On Twitter, however, people are exposed to multiple, diverse points of view through the medium's public timeline.

Contemporary media and the Internet have 'abetted' a culture of polarization, in which people primarily seek out points of view to which they already subscribe (Sunstein, 2001). People's opinions have been shown to become more extreme simply because their view has been corroborated, and because they grow more confident after learning of the shared views of others (Sunstein, 2008).

The presence of homophily can limit people's social worlds in ways that have implications for the information they receive, the attitudes they form, and the interactions they experience. In the online world (and off it too), polarization happens when the members of a deliberating group move toward more extreme views.

In the backdrop of these arguments and the interplay between online communities on public space and nature and form of communication, this research examines the culture of group polarisation on Twitter on controversial news events. This work draws from Sunstein's seminal research on online polarization. The

researcher first describes related work in on 'media events' (Boorstin, 1961), new media technologies (NMT, henceforth) and the diffusion of information (most notably but not limited to van Dijk and Manuel Castells' writings on 'networked societies'), group behaviour, and polarization.

The researcher then describes the details of the #Demonetisation debate and the methods he applies to collect data. In the results section, he describes who tweeted, what they tweeted, to whom did they tweet and other interactions that took place. He then discusses the implications of Twitter use on polarization, and concludes with implications for social media use.

In view of the empirical studies mentioned above, it is evident that the presence of homophily on twitter and other social platforms can limit their social worlds. Homophily is bound to play a significant role in group polarisation, attitude and interaction forms. The tendency to align with isomorphic groups may reinforce their existing attitudes.

Hence, the nature of group polarisation on twitter on dramatic and controversial issues constitutes an important question. These are some major gaps in the existing theoretical understanding and the study addresses itself to these.

In the light of the above existing literature, the presence of homophily in group polarization seems more pronounced in both offline and online studies. The following research questions are posed for probing in this study.

RESEARCH QUESTION(S):

1. Is Twitter a social network or a news media?
2. Does a culture of polarization emerge with engagement on Twitter on a controversial news story?
3. Does the nature and form of polarization formed through engagement reinforce the existing attitudes of the respondents?

The specific objectives, however, are:

1. To study whether Twitter is a medium for social engagement or a breaking news medium
2. To understand the dynamics and patterns of twitter users on controversial issues in terms of the nature of engagement.
3. To observe whether there are diverse range of netizens---in terms of educational background, age group and socio-economic status—who engage on twitter during controversial events?
4. To investigate whether isomorphic people align themselves with those who hold similar opinions?
5. To gain an understanding of the culture of polarization on online public space on a controversial news event.

HYPOTHESES:

The following hypotheses were drawn for the study:

1. Diversity becomes more pronounced during controversial events.
2. The presence of homophily would have the most profound effect in group polarization.
3. Active twitter users may respond and react /proactively and engage with those who hold different/varied opinion from their own.

The following terms have been operationalized for the study:

1. Cyber Culture: a unique set of habits, values and other elements of culture that have evolved from the use of computers and the Internet.
2. Social Participation: all varieties of informal interactions on twitter with individuals and within groups.
3. Public Space: a social place open and accessible to people to interact and enjoy their coexistence and represent their collectivity without losing or disaggregating their diversity.
4. Polarisation: division into two sharply contrasting groups of opinions or beliefs.
5. Hashtag: a word or phrase preceded by a hash sign (#), used on social media websites, especially on twitter, to identify messages on a specific topic.
6. Controversial: giving rise or likely to give rise to a lot of disagreement or argument about something that usually affects or is important to people.

METHODOLOGY:**Population:**

The population for this study will comprise of all tweets from the tweeples (a portmanteau of the words Twitter+people); in this case, those holding a twitter account who responded to the topic of #Demonetisation in India* within the first 24 hours.

The sampling frame for the study has been restricted to the first 24 hours following the demonetization announcement. This has been done because the researcher is interested in analysing the dynamics of immediate engagement and reactions amongst users.

Sample size: 100 tweets

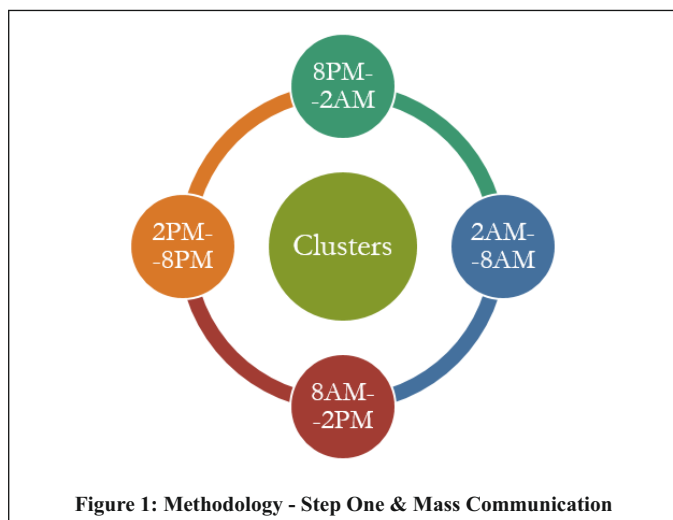


Figure 1: Methodology - Step One & Mass Communication

Sampling technique: A probability sampling technique—the cluster sampling – will be applied, and 100 tweets will be identified for analysis. This is a multi-stage technique and will be applied in the following manner.

The news broke out at 20:15 IST on 9th November 2016.

Since population for this study is all those who tweeted on demonetisation, the sampling frame will be the number of tweets on demonetisation in the first 24 hours.

The tweets will be divided into four clusters based on the time interval. The first cluster comprised of tweets between 8 pm to 2 am. The second from 2 am to 8 am. The third cluster constituted tweets from 8am to 2 pm and the fourth cluster from 2pm to 8 pm. (11th November 2106 to 12th November 2016)

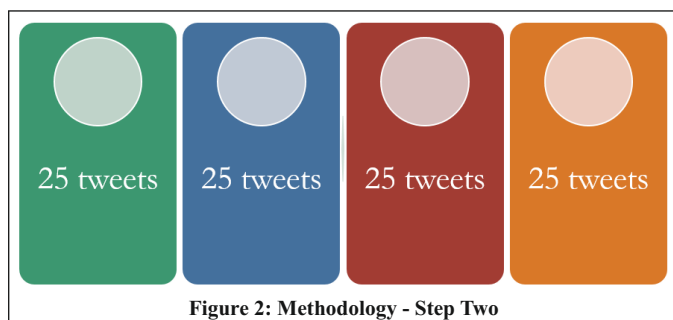


Figure 2: Methodology - Step Two

In the next stage 25 tweets were selected from each cluster applying the simple random sampling technique. A total of 100 tweets formulated the sample size.

Research Design: The qualitative research method was applied to the study.

Netnographic research was undertaken to seek answers to the research questions. Since the research technique applied here is Netnography, the process of analysing the objectives will include content analysis, semiotic visual analysis (if any+primarily, but not limited to visual responses such as videos, pictures and GIFs) and textual analysis. The content analysis technique and the constant comparative technique will be applied to understand the nature of tweets and group dynamics represented.

The researcher manually coded Twitter users for their respective “issue-position” (Kelly, et al., 2005) on #Demonetisation. Despite the availability of studies that apply linguistic markers to study levels of agreement, the researcher is not confident about how they would lend themselves to this study – a one which seeks to analyse 140 character squeezed forms of textual expression! The selected tweets from the users are then analysed.

Initial findings reveal that, unlike other recent seemingly-polarized studies (e.g. the “ABP+Neilson's study of Uttar Pradesh's prospective voters (regarding the Samajwadi Party 'crisis'), had majority of respondents saying “neither” to the questions regarding the Akhilesh-Mulayam split), most people have an opinion on the #Demonetisation debate.

Unit of analysis: A tweet

Data presentation: The data has been interpreted and also presented with tables, bar graphs, process lists, pie diagrams etc.

The Rationale of the study can hence be summarized as:

“The study aims to gain an understanding of cyber culture and the culture of polarization on online public space on a controversial news event; more particularly, examining the effects of Twitter use on group polarization and extremism.”

Web of Polarisation:

Indeed, new media has abetted a culture of polarization, in which people seek out points of views to which they already subscribe. Once their views have been corroborated and once, they learn of the shared views of others, they grow more confident of their views.

This is primarily underlying genesis of the phenomenon of group polarization; wherein people end up in more extreme positions than what they began with. Studies have shown polarization exhibited in offline situations too. (the study of voters who had a Leftist ideology who when engaged in a discussion voters with a Rightist ideology were shown to have ended up in more extreme positions than what they began with.)

This work is not the first in examining polarization online. Previous research has examined polarization, hate speech and extremism in early online communities such as Schafer's - in as early as 2002; little is known as to how it happens in contemporary media outlets, esp, Social Networking Sites (SNS, henceforth), such as Twitter.

In his book, Republic.com, Sunstein, (who happens to be the most frequently cited American legal scholar by a wide margin [in studies conducted from 2009-2014]) writes in the preface,

“In a democracy, people do not live in echo-chambers or information cocoons. They see and hear a wide range of topics and ideas. They do so even if they did not, and would not choose to see and to hear those topics and those ideas in advance. These claims raise serious questions about certain uses of new technologies, above all the internet, and about the astonishing growth in the power to choose—to screen in and to screen out.”

Learning of news events:

Before examining where we are today, let's see how we came to where we are. Let's take Indira Gandhi's assassination, for example. Shailaja Bajpai writes, in “The riots that could not be televised”, in The Indian Express:

“On October 31, 1984, DD was the last one to give us the news of Mrs Gandhi's death. That was typical and expected: nobody turned to TV for the latest news, then; it was radio and BBC that told us what happened in our own backyard. Think it was Salma Sultan who first announced it on DD's evening news, more than 10 hours after she was shot.”

If Radio was to Indira Gandhi's assassination, JF Kennedy's was word of mouth. The Vietnam War became the “First Televised War”. Changes in technology have altered how people first learn of news events. As a sign of the times, people are increasingly turning to social media for learning of news events. It's no wonder then, that when the 26/11 Mumbai attacks of 2008 unfolded, not only did the information spread via Face book and Twitter, but people used Google maps. As Golder, 2009 notes, “during [such] time sensitive events, people's use of Twitter bursts with an astonishing frequency and intensity”.

Yardi & boyd, quote Gantz and Trenholm, when identifying the four reasons as to why people share news about critical events: They write:

1. To satisfy informational and interest needs
2. To establish social status, that they are superior to other people in some manner
3. To express affection and
4. To initiate social contact, to talk with others.

Emotional response triggers a range of behaviours: the need for comfort and social support is also a reason for talking with others about threatening or tragic events. Kubey and Peluso reported that people who shared news of the Challenger explosion were more likely to say that talking with others made them feel better (Kubey & Peluso, 1990). Ibrahim et al. found that individuals who contacted others on September 11 were more likely to report that they sought social

support and coped by discussing the events (Ibrahim, Ye, & Hoffner, 2008).

An Anti-Common Web ~ A Genesis of Group Polarization online

Sunstein has been amongst the pioneers in writing on polarization and filters of the web; many more scholars have followed suit. The researcher can't do better, but quote their findings:

Kelly et al. have written about the effect of how group polarization unfolds in an online space. The Internet has been termed as a kind of an "anti-commons" that allows its users to consume information and relate with others on the basis of shared values and interests only. (Kelly et al., 2005). However, it must be pointed out that public institutions in the world around us---- information "commons" or the mainstream mass media--- keep in check our individual preferences --- in which people are exposed to a wider spectrum of viewpoints which they would not otherwise encounter as the Internet is less public (Kelly et al., 2005). Furthermore, Adamic et al.'s a study of political blogs showed that the NY Post, The WSJ Opinion Journal and the Washington Times receive the majority of their links from right leaning blogs, while the LA Times, the New Republic and the Wall Street Journal were largely linked by left leaning blogs (Adamic & Glance, 2005)

A similar trend has been observed in studies of book sales on Amazon indicating that purchasing patterns are strongly clustered by political parties (Krebs, 2000). However, results of studies group polarisation differ; a study of agreement levels in different genres of blogs by Gilbert et al suggested that entertainment blogs and technology inspired less polarization than lifestyle, politics and blogs about blogs (Gilbert, Bergstorm & Karahalios, 2009). In yet another subsequent study on political blogs revealed that widely read political bloggers have a greater possibility of linking and connecting to others who share their political views; but that bloggers across the political spectrum respond to each other's writing substantively, both favourably and unfavourably (Hargittai, Gallo, & Kane, 2008). Similarly, a study by Kelly et al on political groups indicated that discussions were more likely to occur across like-minded clusters of groups rather than within them (Gilbert, et al., 2009). It emphasised that people go online to argue, rather than agree. It can be inferred that deliberation and argumentation online are particularly important when political, emotionally charged or controversial issues are discussed.

What the FAQ just happened!?

• The 2016 Indian Banknote Demonetization of ₹ 500 & ₹ 1,000 Mahatma Gandhiseries

The Government of India announced the demonetisation of all Rs. 500 (US\$7.70) and ₹ 1,000 (US\$15) banknotes of the Mahatma Gandhi Series on 8 November 2016. This initiative, the government claimed would help to curb the shadow economy and crack down on the illegal and illicitly held counterfeit cash used to fund terrorism. This unexpected and sudden notification and the prolonged cash shortages in the weeks that followed- lead to a significant disruption throughout the country posing a threat to economic output. This move was highly criticised as it was poorly planned and unfair and met with strikes, protests and litigation.

An unscheduled live televised address on 8th November at 20.00 Indian Standard Time (IST) saw the Prime Minister of India, Narendra Modi announcing the demonetisation of all ₹ 500 and ₹ 1000 banknotes of the Mahatma Gandhi Series would be invalid past midnight. In his announcement, Modi declared that new ₹ 500 and ₹ 2000 banknotes of the Mahatma Gandhi New Series would be issued in exchange for the old banknote.

In an immediate repercussion to demonetisation The BSE SENSEX and NIFTY 50 stock indices fell over 6 percent on the very next day. The days that followed demonetisation, people across India faced cash crunch with detrimental economic effects across the country. It was reported that people had to stand in long queues for hours in the biting cold resulting in some deaths.

Initially the move was welcomed by some international experts and analysts including bankers. But as the days unfolded, the move received severe criticism and flak from the members of the opposition parties leading to acrimonious debates and triggering protests against the government across India. Demonetisation resulted in slowing down industrial production and is considered to have reduced the country's GDP. Prominent economists and the world media criticised this move in the days that followed due to cash shortage.

As the news spread

As the news spread, Twitter users began to voice strong and polarized views about demonetisation. In keeping with Twitter's slogan- "What's happening", users tweeted their mind.

The debate was, clearly, a polarized one.

While some were all for the move, the others against it; what initially appeared as a simple a simple "note-ban" in people's tweets and their offline discourse too, got quickly replaced by the accepted economic term, "#demonetization" or "#demonetisation".

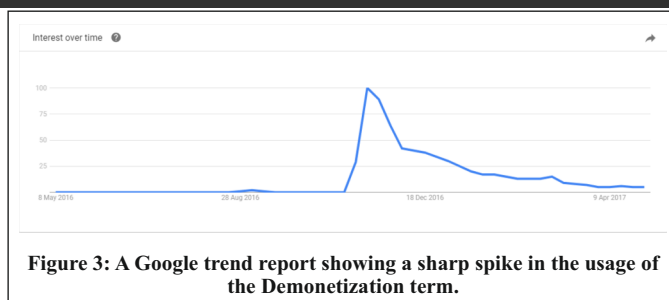


Figure 3: A Google trend report showing a sharp spike in the usage of the Demonetization term.

However, #demonetization, in itself is a neutral hashtag, speaking nothing of user's stand on the issue. Hence, instead of seeing tweets from a follower network of mostly likeminded people, the researcher decided that people who followed the public search stream (i.e. search.twitter.com) were exposed to a diverse set of viewpoints about the story.

The researcher examines these by looking at how people found and propagated news about the Demonetization, who they discussed the issue with, and how extreme their views were.

Debates around a political move this scale are deeply personal and cultural in nature. This is primarily why the researcher did not anticipate a dramatic shift in people's views, based merely on what other people posted. The researcher was, hence, simply interested to know, do people who tweeted about the #demonetisation debate become more extreme in their posts, and is detecting patterns in behavior and network externalities possible, that may have influenced the kinds of things they said?

This research work is hence centred around examining the effects of Twitter use on group polarization and extremism.

Why Twitter?

This research is different from prior work on homophily and online polarization in a few ways. Firstly, Twitter conversations differ from other online outlets such as Usenet (see (Kelly, Fisher, & Smith, 2005)) where people come to the discussion intentionally; On Twitter, however, people (it's users) simply witness a conversation and are drawn into it.

Add to it the 140 character 'constraint' as well as the speed at which topics flow, which further distinguishes Twitter from blogging sites such as WordPress and BlogSpot.

Finally, Twitter's public timeline offering, is how it is starkly different from a Facebook news feed ~ which is public only to a local neighbourhood within one's network, while Twitter conversations (excluding protected accounts) are public to anyone who looks (Yardi & boyd, 2009). Through hashtags and the public timeline, people can witness public conversations they otherwise might not, and can participate in conversations they otherwise may not have. This has implications for access to resources and diversity of information.

Learning(s) from the Masters:

This tiny chapter is a list of the research findings and ground-breaking works (often seminal) in the fields of sociology, communication and technology. (The researcher included this as a separate section instead of including this under the theoretical framework or RoL because they form building blocks, upon which this research builds off.)

As Yardi, S & boyd, d (2009), put it, these assumptions can be enumerated as:

1. Social Equality can be achieved only when people have access to news and information. (Hargittai, 2008)
2. Plurality of information and viewpoints necessitates and promotes diversity only when an individual is exposed to diverse and multiple opinions. Monopoly of a single viewpoint or a lack of exposure can lead to homogeneous or narrow-minded views. Sunstein, 2001)
3. Engaging with isomorphic people can lead to polarisation, equality and extremism (Sunstein, 2001)

Issue position ≠ Political Commitment;

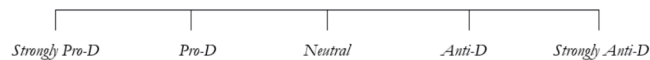
Drawing content categories:

In the era of Donald Trump and his 'vicious rhetoric' finding a place in popular culture, the best way to explain the title of this chapter is this: A pro-Republican Trump supporter may be all out and about in support for his actions, but due to his/her sexual orientation might not support Trump's homophobia. A pro-Democrat Hilary Clinton supporter can be in support of all of Clinton's moves, but may vehemently oppose her "Gay rights are human rights" stance.

Hence, instead of categorizing people on the basis of their political commitment, i.e. whether or not they are a Narendra Modi supporter, the researcher manually codes Twitter users for their respective "issue-position" (Kelly, et al., 2005) on the #Demonetisation debate. He examines tweets about the #Demonetisation from each user and in some cases looks at the user's Twitter profile more generally to code their position on the issue.

(For the sake of simplicity, the word "Demonetis/zation" has been replaced with a capitalized D throughout the course of this work unless otherwise stated.)

The content categories were drawn on a 5-point scale.



A prototypical pro-D tweet was on the lines of:

#Demonetisation Huge move to root out black money, despite all the shortcomings. Positive development in the long run. More courage needed

A prototypical anti-D tweet read something like:

#DeMonetisation is illconceived probably counter productive. #Fail @rbi @PMOIndia @arunjaitley

Sobering reality check by @AmbaAzaad on the very marginalized in our society who need to be prioritized in this #demonetization transition

Tweets that could not be classified into either of the categories were classified as neither and read something like this:

**Every Tamil mom is gonna say
Itoldyou so. Gold is always safe"
#demonetization**

Master stroke with initial sweet pain..#demonetisation of 500 and 1000...#Modiji

But as the researcher went further with the data analysis, two broad categories were beginning to emerge- strongly worded tweets. On seeing the same, the researcher further categorized the tweets as "strongly pro-D" and "strongly anti-D" They were done on three basis:

- Associated the move with terrorism
- Used abusive language
- Exhibited uncivilized and unethical human responses (predominantly seen as rejoicing in the death of people and/or branding the voices of families of the deceased as anti-national)

Hence, a Strongly Pro-D read something on the lines of

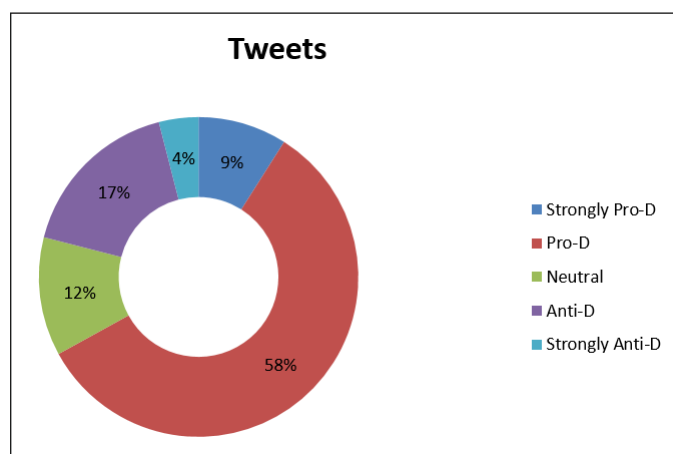
Why are #AAPTARDS opposing #DeMonetisation ? Does Nodemonetization (sic) helps fight Corruption more than demonetization of 500/1000?

Similarly, a prototypical Strongly Anti-D read something as thus:

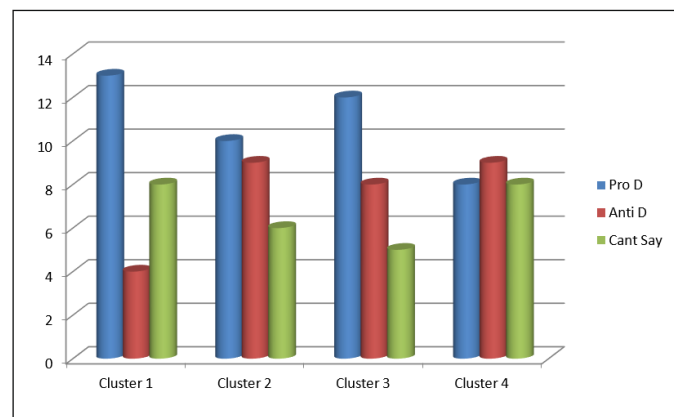
#Demonetization is an act by Saffron Terrorists.

DATA ANALYSIS AND INTERPRETATION:

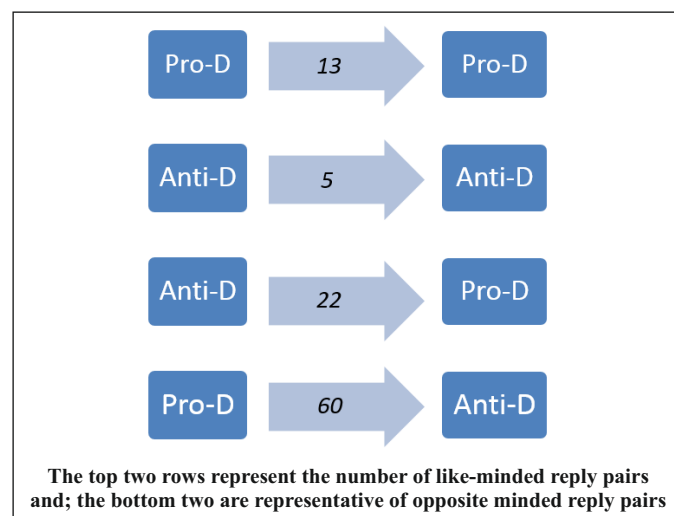
i) On the basis of captured tweets:



ii) On the basis of frequency per quarter:



iii) On the basis of reply-pair tweets:



INFERENCES AND CONCLUSIONS:

The impact of social media on social participation has been one of the most frequently debated topics across the world. Research has been carried out in the recent years across the globe especially on group dynamics and web polarization. However, in India, the demonetization notification, a controversial issue, was debated not only among intellectuals but among diverse groups of people, rich or poor; educated or uneducated; belonging to different religions and other categories. The social media especially twitter found a very heavy traffic in the immediate response to demonetization. The present study is an endeavor to illustrate the impact of demonetization on opinion forming and group polarization on twitter. The assumption that the presence of homophily pre-supposes that people with similar opinion are bound to relate to groups which hold similar opinions as theirs. This tendency is expected to have a significant effect on group polarization. In view of the research questions, hypotheses and specific objectives the study revealed the following:

1. Homophily, not that bad either:

The results from this work were both homophily and heterogeneity in conversations about #Demonetization.

Twitter was abuzz with activity on the day Demonetization was notified. It was expected that twitter users would engage with various conundrums on this eventful day. It was also expected that people would engage in conversations with others who share similar views as they do. However, it was noted that active twitter users are likely to be engaged with those who hold different and varied opinions. The narrative of diversity becomes more pronounced during calamitous events. As argued by Hulbert, Haines & Beggs, 2000, this research too, furthers their finding that, although debate and diversity are critical components of a democratic society, the 'element of social support' can be provided through the presence of homophily. A range of homogeneous exchanges with people can help them to emotionally withstand the trauma while discussing or mourning dramatic events.

2. More 'media' than 'social':

The results suggest that newer media outlets have continued the legacy of breaking the preceding medium's swiftness in 'breaking' news. Twitter too has followed suit and has become the go-to medium for any breaking news, offering its users a wide array of filters to get relevant results. Setting a filter to limit one's geography can help confirm the slightest of seismic movements, too banal for mainstream media. Thus, Twitter today, has become

more media-media than social media.

Once upon a time, (not so long ago), humans lived in the age of the broadcast world. The editors of publications were the traditional gatekeepers. Then, with the advent of the internet, traditional gatekeeping roles saw a flip never imagined, with social media adding abundant democratization. Then came the algorithm, replacing on a massive scale, 'the editor'. We are now being provided the most personally relevant as well as appealing results. The Code is the Master of this filtration. However, these codes are but, written by humans. Although unlike the good old 'editor-gatekeeper', the code-gatekeeper's human coder is not a keeper of public trust. Guided by little or no journalistic ethics.

Hence, what's needed is not a reversal to the past, i.e., the days of the editor. Certainly not. A democracy encourages engagement with different viewpoints, but when the internet is limiting that engagement (by offering information that is reflective of our established view), it is also limiting our ability to engage.

What's needed is this: since our browsing and behavioral patterns is what trains' these filters/codes/algorithms, it is imperative to develop, what the researcher proposes to call 'filter literacy'. Users of the internet need to develop, understand and decipher the working of these tools while at the same time demand content that aids the widening of their horizons – even when it's seemingly uncomfortable.

This, however cannot be realized to its full potential, unless and until the tech giants widen their horizons, giving users a more transparent, understandable (and to an extent, controllable) view of the working of these filters.

As, Eli Pariser, author of 'The Filter Bubble: What the Internet Is Hiding From You', puts it, "While it's sometimes convenient to see only what you want to see, it's critical at other times that you see things that you don't."

A more concerted solution to the problem the academia argues is that, mapping the trajectory of the cultural context is imperative. Sunstein, for instance, argues that shifting towards a generic sort of a "public sphere" without any significant hurdle in deliberation, there is a fair likelihood of low extremism and instability, but the result may be a "stifling uniformity". Hence, he throws much light on the need for directing deliberation in such a manner that the resulting polarization stems from learning rather than just another manifestation of group dynamics. As argued in this study, issue positions have, more often than not, shown to be independent of political commitments or in-group associations. Learning-led polarization will help promote the ability of voicing of the perspectives & views of such individuals; thus, aiding even the 'within-group' discussion to go in the direction of debate and discussions.

In the backdrop of the interplay between uniformity of opinions, polarization and group dynamics, Yardi and Boyd suggest a two-pronged approach. (However, both being primarily from the social computing background, suggest a tech-driven, nonetheless potentially effective approach.) Firstly, to maintain stability and balance, they suggest, putting to use voting and ranking algorithms. Secondly, to promote rigorous debates and diversity of viewpoints it is imperative to encourage and motivate people from marginalized, diverse racial, social and educational backgrounds towards participation. The internet has expanded the spectrum of the demographics of its users. The ever-broadening spectrum of diverse people using the internet--from elderly users to those in rural belts, has also widened the range of opportunities to engage in diverse discussions.

Parks and newspapers have, for long, served as a kind of 'information commons', where people meet and discuss. If the growing evolution of information online into an anti-common platform is not checked, then the future of social media, or rather say, the future of these massively giant socio-technical systems will remain, anti-common.

Polarization, homophily, filtering, algorithm-gate keeping~ may be argued along the lines of empirical evidence or at a normative level. However, in the ultimate analysis, the arguments about diversity and/or the lack of it, solidarity and division, justice and injustice, are too important to be left to science.

Theoretical Relevance of the study:

The theoretical contribution of the study lies in its ability to fill in the gaps in existing literature regarding the culture of polarization, uniformity of opinions and attitude formation on Twitter. Rather than homogenizing the effect of demonetization the study is able to specify how group polarization takes place and the nature of tweets explains how engagement and group dynamics on controversial issues promotes diversity. The internet has expanded the spectrum of the demographics of its users. The ever-broadening spectrum of diverse people using the internet--from elderly users to those in rural belts, has also widened the range of opportunities to engage in diverse discussions pointing towards diversity thereby endorsing one of the major hypotheses.

Going further, the study reveals that twitter is more a news breaking media rather than social. The results suggest that newer media outlets have continued the legacy of breaking the preceding medium's swiftness in 'breaking' news.

Also, the study engages to indicate that mapping the trajectory of the cultural context is significant. The deliberations that take place tend to shift towards a generic "public sphere" without any prominent hurdle and therefore, there is a fair likelihood of low extremism and instability, but the results point towards a "stifling uniformity". This implies that polarization stems from learning rather than just another manifestation of group dynamics. Hence the study prevents us from visualizing any one-to-one relationship between attitude formation and group polarization.

As argued in this study, issue positions have, more often than not, shown to be independent of political alignment or in-group associations. Learning-led polarization helps promote the ability of voicing opinions and views of such individuals; thus, aiding even the 'within-group' discussion to go in the direction of debate and discussions thus, strengthening democracy.

The present study therefore, helps in laying bare some of the mechanisms which homophily has been working as an intervening variable in the process of group polarization. The presence of homophily explains the isomorphic nature of groups which basically tend to engage within themselves. To conclude, that homophily not only makes a differential impact upon different groups of people on twitter, it also impacts various forms of social engagement and participation very differently.

The theoretical relevance of the present study lies in going beyond the relationship between uniformity of opinions, attitude formation and group polarization. It provides insights into specific conditions of filtering, algorithm-gate keeping~ by the socio-technical giants under which group polarization may or may not produce the given impact within the framework of online social participation and engagement.

Richness of a study also lies in its ability to raise some new issues which may be taken up for future research,

LIMITATIONS OF THE STUDY:

This study limited to the first 24-hour responses by individual account holders on Twitter to the demonetization announcement.

Twitter introduced support for hash tagging in a few local Indian languages in 2015. However, with this study focused on English language hashtags i.e., #Demonetization & #Demonetisation, it was not inclusive of those who sent out tweets in Hindi or Marathi, albeit tweeting in the first 24 hours.

It's important to note that the Twitter stream turns back more search results when making queries in real time. The tweets returned in the case of this research work are hence a subset of the total tweets sent out during the time.

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